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10/789,124	02/27/2004	Robert Beverley Basham	SJO920030103US1	8774

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EXAMINER	
HUSSAIN, TAUQIR	

ART UNIT	PAPER NUMBER
2152	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/789,124	BASHAM ET AL.	
	Examiner	Art Unit	
	TAUQIR HUSSAIN	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,14-18 and 27-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,14-18 and 27-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to amendment /reconsideration filed on 05/20/2008, the amendment/reconsideration has been considered. Claims 1-11 and 14-18 have been amended, claims 12-13 and 19-26 further claims 27-36 has been newly added and therefore, claims 1-11, 14-28 and 27-36 are pending for examination, the rejection cited as stated below.

Response to Arguments

2. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "wherein the current state value is a CRC code, and wherein the CRC code is computed utilizing data associated with the corresponding data aggregation and a CRC polynomial" in independent claims 1, 27, 35 and 36 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-11, 14-18 and 27-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Connor et al (Pub. No.: US 2004/0024863 A1), hereinafter, "Connor" in view of Sheehy, Jr. et al (Patent No.: US 7233957 B1), hereinafter, "Sheehy" and further in view of A component of the Greenstone digital library software from the New Zealand Digital Library Project at the University of Waikato, New Zealand, hereinafter "CRC32.cpp"..

5. As to claims 1, Connor discloses, defining a plurality of network data aggregations (Connor, Fig.1, elements-10a-10c, [0020], where network data storage 10a-10c are disclosed);

computing a current state value for at least one of the data aggregations (Connor, [0008], where recently added entry is a state value which can be to the added entry in the network discovery);

for at least one current state value, determining if the current state value is different than a corresponding prior state value for corresponding data aggregation (Connor, [0009], where final state pass state detection means state value between first and final is obviously different since there has been an added entry before final state); and

merging data corresponding with at least one different data aggregation determined to have a current state value that is different than a corresponding prior state value for the different data aggregation (Connor, Fig.3, element-58-64, [0041], where data gatherer merges the newly detected network component in the fabric which obviously changes the state value of the overall system.

Connor however is silent on disclosing explicitly, merging above data aggregation.

However, Sheehy discloses, merging above data aggregation (Sheehy, Fig.4-9, Col.11, lines 36-44,where first state value change is calculated with respect to the prior state value and Fig.5, Step-205-208 describes if current verification value is equal to the

former or prior verification value than in step-208 “add that former verification value to the current management data set).

Therefore, it would have been obvious to one ordinary skilled in the art to determine and reflect the affects of any overall changes in the SAN fabric in the management database as taught by Sheehy in the system of Connor (which reflect the zonal changes in the SAN environment) to overcome overall diagnostic troubleshoot limitation is SAN fabric through analyzing management database of Sheehy (Sheehy, Abstract).

Connor and Sheehy however are silent on disclosing explicitly, wherein the current state value is a CRC code, and wherein the CRC code is computed utilizing data associated with the corresponding data aggregation and a CRC polynomial, wherein the CRC polynomial is a 32 bit CRC polynomial which has the following form: X^32+X^26+X^23+X^22+X^I6+X^I2+x^11+X^I0+X^8+X^7+X^5+X^4+X^2+X+I;

CRC32.cpp discloses wherein the CRC polynomial is a 32 bit CRC polynomial which has the following form:

X^32+X^26+X^23+X^22+X^I6+X^I2+x^11+X^I0+X^8+X^7+X^5+X^4+X^2+X+I (CRC32.ccp, Page.3, ifdef __USE_CRC32_TABLE_FUNCTIONS__int MakeCRC32 (ostream &stream), where 32 bit CRC polynomial is used to calculate a sophisticated checksum based on the algebra polynomials).

Therefore it would have been obvious to one of the ordinary skilled in the art at the time the invention was made to combine the teachings of Connor and Sheehy as applied to independent claim 1 above with the teachings of CRC32.ccp in order to

provide a method where the Cyclic Redundancy Check, is a way to detect bit errors that occur during data storage or transmission.

6. As to claim 2, Connor, Sheehy and CRC32.ccp disclose the invention substantially as in parent claim 1, including, wherein the plurality of network data aggregations are defined based on zoning information (Connor, [0010], where zoning is disclosed in SAN environment).

7. As to claim 3, Connor, Sheehy and CRC32.ccp disclose the invention substantially as in parent claim 1, including, wherein the plurality of network data aggregations are defined based on topology information (Connor, [0004], where topology is disclosed based on switches and devices connected in the fabric where each device can communicate with other device which can be a cross platform scenario).

8. Claim 4 is rejected for same rationale as applied to claim 3 above.

9. As to claim 5, Connor, Sheehy and CRC32.ccp disclose the invention substantially as in parent claim 1, including, wherein the operations further comprise polling agents, to gather data for the at least one data aggregation to which a current state value is to be computed (Connor, [0024], where discovery tool has a task class which is a polling agent and generating a new task for each separate operations to be performed concurrently means each operation has a separate value which is a state value).

10. As to claim 6, Connor, Sheehy and CRC32.ccp discloses the invention substantially as in parent claim 1, including, wherein the operations further comprise receiving notifications from agents, to gather data for the at least one data aggregation to which a current state value is to be computed (Connor, [0049], where task invoked by the data gatherer knowledge source 58 generates (at block 210) an entry for each discovered component for the data store 52, each entry for added component represents a current state value for that given time).

11. As to claim 7, Connor, Sheehy and CRC32.ccp discloses the invention substantially as in parent claim 1, including, wherein the operations further comprise assigning an initial state value for each data aggregation (Connor, [0040], where knowledge source array provide a list of initialized knowledge source).

12. As to claim 8, Connor, Sheehy and CRC32.ccp discloses the invention substantially as in parent claims 1 above, including, wherein the operation of computing a current state value to at least one of the data aggregations is performed by at least one agent discovery service (Connor, [0012], where discovery tool has a task service which performs operations e.g. detecting newly added component and generating entries for each new event).

13. As to claim 9, Connor, Sheehy and CRC32.ccp discloses the invention substantially as in parent claim 1, including, wherein the operation of computing a

current state value for at least one of the data aggregations is performed by a management client (Connor, Fig.2, where task is a management client).

14. As to claims 10 and 11, Connor, Sheehy and CRC32.ccp discloses the invention substantially as in parent claim 1, including, wherein the operation of computing a current state value for at least one of the data aggregations comprises processing data in the at least one of the data aggregations in a prescribed order (Connor, [0042], where first in first out is a prescribed order).

15. As to claim 14, Connor, Sheehy and CRC32.ccp discloses the invention substantially as in parent claim 1, including, wherein the operations further comprise receiving data corresponding with at least one data aggregation wherein the current state value is different than a corresponding prior state value.

16. As to claims 15 and 16 are rejected for same rationale as applied to claim 1 above.

17. As to claim 17, Connor, Sheehy and CRC32.ccp discloses the invention substantially as in parent claim 16, including, wherein the plurality of data aggregations includes at least one data aggregation that is a subset of a corresponding superset data aggregation (Connor, fig.1, element-8a and 8b are subset with in the Fabric where Fabric is a superset, and wherein the subset data aggregation is located in the hierarchal ordering after the corresponding superset data aggregation (Connor, Fig.1,

[0020], where Storage 10a, 10b and 10c are in hierarchical order corresponding to Host 6a, 6b and 6c with in the Fabric which is a superset).

18. As to claim 18, Connor, Sheehy and CRC32.ccp discloses the invention substantially as in parent claim 1, including, wherein the operations further comprise requesting polling on data aggregations that are subsets of a superset data aggregation that has a changed state value (Connor, [0011], Fig.2, where blackboard component calls the program which polls and run operations to discover changes in SAN system and reports the aggregated data to SAN management system).

19. As to claim 27, defining a plurality of data aggregations, wherein the data aggregations are defined based on fabric boundaries (Connor, fig.1, elements-10a-10c, [0020], where network data storage represents the network data storage fabric boundary);

obtaining initial data for each data aggregation each data aggregation in a prescribed order (Connor, [0007], where discovering a network component is obtaining initial data for data aggregation and adding the entry to the data storage obviously has prescribed order);

gathering data for at least one data aggregation in the plurality of data aggregations (Connor, [0007], where further discovery operation means there are plurality of data aggregation and therefore first discovery can be interpret as at least one data aggregation);

organizing the data in a particular order, for each data aggregation for which data is gathered (Connor, [0042], where task queue organizes the data e.g. first in first out, a priority based scheme so higher priority tasks are processed before lower priority tasks);

traversing the data in a particular order, for each data aggregation for which data is gathered (Connor, [0042], where data is processed based on defined scheme);

Connor is silent on disclosing explicitly, for each computed current state value, determining if the current state value is different than a prior state value for the corresponding data aggregation or computing a current state value for each data aggregation for which data is gathered, wherein each current state value is a CRC code, and wherein each CRC code is computed utilizing data associated with the corresponding data aggregation and a CRC polynomial.

for each computed current state value, determining if the current state value is different than a prior state value for the corresponding data aggregation (Sheehy, Abstract, where current state value and previously collected data values are compared to identify changes);

computing a current state value for each data aggregation for which data is gathered (Sheehy, Abstract, where current management data set is the current state value), wherein each current state value is a CRC code, and wherein each CRC code is computed utilizing data associated with the corresponding data aggregation and a CRC polynomial (Sheehy, Col.3, lines 50-60, where CRC or checksum is disclosed),

Therefore, it would have been obvious to one ordinary skilled in the art to determine and reflect the affects of any overall changes in the SAN fabric in the

management database as taught by Sheehy in the system of Connor (which reflect the zonal changes in the SAN environment) to overcome overall diagnostic troubleshoot limitation is SAN fabric through analyzing management database of Sheehy (Sheehy, Abstract).

Connor and Sheehy however are silent on disclosing explicitly, wherein the CRC polynomial is a 32 bit CRC polynomial which has the following form:

X^32+X^26+X^23+X^22+X^I6+X^I2+x^11+X^I0+X^8+X^7+X^5+X^4+X^2+X+I;

CRC32.cpp discloses wherein the CRC polynomial is a 32 bit CRC polynomial which has the following form:

X^32+X^26+X^23+X^22+X^I6+X^I2+x^11+X^I0+X^8+X^7+X^5+X^4+X^2+X+I

(CRC32.ccp, Page.3, ifdef __USE_CRC32_TABLE_FUNCTIONS__int MakeCRC32 (ostream &stream), where 32 bit CRC polynomial is used to calculate a sophisticated checksum based on the algebra polynomials).

Therefore it would have been obvious to one of the ordinary skilled in the art at the time the invention was made to combine the teachings of Connor and Sheehy as applied to independent claim 1 above with the teachings of CRC32.ccp in order to provide a method where the Cyclic Redundancy Check, is a way to detect bit errors that occur during data storage or transmission.

20. As to claim 28, carry similar limitations as claim 2, 3 and 4 above and therefore is rejected under for same rationale.

21. As to claim 29, Connor, Sheehy and CRC32.cpp discloses the invention substantially as in parent claim 27 above, including, wherein the operations of gathering data, organizing the data, and computing a current state value, are first performed with a superset data aggregation which is a superset of a plurality of subset data aggregation (Sheehy, Col.2, lines 1-20, where console which controls the whole network or superset of components, interact with server and network management database to aggregate data for the whole network), and then are performed with at least one of the subset data aggregation (Sheehy, Col.2, lines 10-15, where agents which can be relate as subset collects information periodically).

22. As to claim 30, is rejected using the rationale of claim 27 and 29 as set forth above.

23. As to claim 31, carry similar limitation as claim 30 above, therefore is rejected under for same rationale. Additionally, it is obvious in a hierarchical base system that processes are applied individually or it can be applied to whole set in a single level or processes may be applied to the whole system, therefore it is merely a preferential setting how and which way system performs the best.

24. As to claim 32, Connor, Sheehy and CRC32.cpp discloses the invention substantially as in parent claim 31 above, including, wherein the superset data aggregation is an entire system (Sheehy, Abstract, where network overall can be considered as the entire system and is equivalent to the superset data aggregation).

25. As to claim 33, Connor, Sheehy and CRC32.cpp discloses the invention substantially as in parent claim 27 above, including, wherein a state change is define as a current state value which is different than a corresponding prior state variable (Sheehy, Fig.7, element-305, where data reflects a change in comparison to management data in managed objects in the management database).

26. As to claim 35 and 36 are carrying the limitations of claims 27 and 31-33 and therefore are rejected under for same rationale.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAUQIR HUSSAIN whose telephone number is (571)270-1247. The examiner can normally be reached on 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571 272 3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. H. /
Examiner, Art Unit 2152

/Bunjob Jaroenchonwanit/
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